

Appl. No. 10/719,116
Amendment B
Reply to Office Action mailed Apr. 13, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A multi-sensor detector comprising:
 - at least one ~~fire~~ smoke sensor;
 - at least one transducer for converting an incident acoustic signal to an electrical signal;
 - control circuits coupled to the at least one sensor and the electrical signal for establishing the presence for fire condition in the vicinity of the transducer, based at least in part on incident acoustic signals emitted by an on-going fire present in a predetermined local region adjacent to the transducer; and an interface for communication of representations of at least portions of the electrical signal to a displaced monitoring system for audio presentation.
2. (Original) A detector as in claim 1 which includes a thermal sensor coupled to the control circuits.
3. (Original) A detector as in claim 1 where the control circuits include pre-stored fire profiles and circuitry for matching at least some of the electrical signals with at least one profile.
4. (Original) A detector as in claim 1 which includes pre-stored instructions for communicating, via the interface, information as to presence of a fire condition based in

part on the electrical signal.

5. (Original) A detector as in claim 4 which includes instructions for fire profile processing to establish flame location.

6. (Original) A detector as in claim 4 which includes instructions for conveying received audio inputs from individuals in the vicinity of the transducers to the displaced system.

7. (Original) A detector as in claim 1 which includes instructions to alter a fire condition determining parameter in response to the electrical signal.

8. (Currently Amended) A detector as in claim 6 which includes instructions for altering a sensitivity parameter of the fire smoke sensor in response to the electrical signal.

9. (Original) A detector as in claim 8 which includes a second sensor, coupled to the control circuits, for monitoring ambient temperature.

10. (Currently Amended) An alarm system comprising:

a plurality of ambient condition detectors, at least some of the detectors each incorporate an audio transducer configured to provide fire related and occupancy information[[;]] as well as a smoke sensor.

a control unit, in bi-directional communication with the detectors, the control unit including instructions for monitoring outputs of the audio transducers for establishing information pertaining to the location of individuals in the vicinity of respective transducers and which includes instructions for tracking movements of individuals in the vicinity of respective transducers.

11. (Original) A system as in claim 10 which includes instructions for monitoring detector outputs indicative of audio based fire profiles to establish fire locations and direction of travel.

12. (Original) A system as in claim 10 which includes instructions for monitoring transducer outputs indicative of individuals in the vicinity and for presenting graphical images reflective thereof.

13. (Canceled).

14. (Original) A system as in claim 10 which includes software for evaluating the presence of alarm conditions, at least in part, in response to outputs from the transducers.

15. (Original) A system as in claim 10 which includes software for evaluating the presence of alarm conditions, at least in part, in response to thermal conditions in the vicinity of respective detectors.

16. (Currently Amended) A system as in claim 14 for adjusting at least one operational parameter of same some of the detectors smoke sensors in response to audio transducer output.

17. (Original) A system as in claim 16 where detector sensitivity is altered in response to audio transducer output.

18. (Previously Presented) A system as in claim 16 where at least some of the detectors include heat sensors.

19. (Original) A system as in claim 16 where the control unit includes instructions for displaying fire development in the vicinity of respective detectors.

20. (Currently Amended) A method of monitoring a region comprising:

evaluating a plurality of audio indicia from the region;

adjusting operational parameters of a plurality of ambient condition detectors in the region in response to at least some of the audio indicia

determining at least in part in response to the audio indicia, if a fire condition is present somewhere in the region; and

determining at least in part in response to the audio indicia if the region is occupied.

21. (Original) A method as in claim 20 including:

providing a graphical display of a developing fire condition in the region.

22-24 (Canceled).

25. (Currently Amended) A bi-directional communication system comprising:

a plurality of ~~ambient condition~~ variable sensitivity smoke detectors transmitting indications of respective environmental conditions;

at least one device transmitting audible indications from an audio transducer;

control circuitry receiving the environmental condition indications and audible indications from the audio transducer;

wherein the control circuitry uses the indications from the transducer for establishing the location of sound generating activities within a region and uses the environmental condition indications for establishing the location of environmental conditions within the region; and

display circuitry for indicating the environmental condition and movement of sound generating activities within the region.

26. (Canceled).

27. (Previously Presented) A system as in claim 25 which includes audio output circuitry, adjacent to the display circuitry for emitting audio corresponding to received audible indications.

28. (Previously Presented) A system as in claim 27 which includes circuitry for processing received audible indications prior to emitting corresponding audio.